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B¹
73. (Once amended) An agent comprising a baculovirus, wherein the baculovirus directs transcription of at least one ribonucleic acid (RNA) that, when present within a cell, forms a double-stranded structure that inhibits expression of at least one gene.

B²
75. (Once amended) An agent comprising a baculovirus vector, wherein the baculovirus vector directs transcription of at least one ribonucleic acid (RNA) that, when present within a cell, forms a double-stranded structure that inhibits expression of at least one gene, wherein the RNA comprises two separate complementary strands, and wherein the baculovirus expression vector comprises a DNA segment flanked by two promoters, wherein the promoters are operably linked to the DNA segment, and wherein the promoters are oriented so as to direct transcription of both sense and antisense RNA transcripts from the flanked DNA segment.

B³
78. (Once amended) An agent comprising a baculovirus, wherein the baculovirus directs transcription of at least one ribonucleic acid (RNA) that, when present within a cell, forms a double-stranded structure that inhibits expression of at least one gene, wherein the RNA comprises one strand that is self-complementary.

79. (Once amended) The agent of claim 73 or 74, wherein at least a portion of the ribonucleic acid sequence is substantially identical to at least a portion of the sequence of the at least one gene.

80. (Once amended) The agent of claim 73 or 74, wherein the cell forms part of a tissue of a target pest organism.

81. (Once amended) The agent of claim 73 or 74, wherein the baculovirus is selected from the group consisting of: the *Autographa californica* multiple polyhedrosis virus, the *Orgyia pseudotsugata* MNPV, the *Lymantria dispar* MNPV, the *Helicoverpa zea* NPV, and the *Bombyx*

mori NPV.

82. (Once amended) The agent of claim 73 or 74, wherein the at least one gene to be inhibited is an essential gene in an [the] insect.

83. (Once amended) The agent of claim 73 or 74, wherein at least one gene to be inhibited is a gene involved in development in a pest organism.

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conc
84. (Once amended) The agent of claim 73 or 74, wherein at least one gene to be inhibited is involved in neurotransmission in a pest organism.

85. (Once amended) The agent of claim 73 or 74, wherein at least one gene to be inhibited is expressed in the insect alimentary canal or Malpighian tubules.

86. (Once amended) The agent of claim 73 or 74, wherein the at least one gene to be inhibited is naturally found in an insect selected from the order *Lepidoptera*.

87. (Once amended) The agent of claim 73 or 74, wherein the at least one gene to be inhibited is naturally found in an insect selected from the list consisting of: the cotton bollworm (*Helicoverpa zea*), the cabbage looper (*Trichoplusia ni*), the alfalfa looper (*Autographa californica*), the tobacco hornworm (*Manduca sexta*), the tobacco budworm (*Heliothis virescens*), the fall armyworm (*Spodoptera frugiperda*), the European corn borer (*Ostrinia nubilalis*), the eastern spruce budworm (*Choristoneura fumiferana*), the western spruce budworm (*C. occidentalis*), and the gypsy moth (*Lymantria dispar*).

B4
90. (Once amended) An insecticidal composition comprising the agent of claim 73 or 74, wherein the gene is an insect gene, and an agriculturally suitable carrier.

92. (Once amended) A recombinant baculovirus comprising:

a first promoter;

a second promoter;

a DNA segment whose sequence comprises at least one sequence at least 80%

identical to a portion of the sequence of at least one insect gene, wherein the at least one insect gene is selected from the list consisting of: genes that are essential in a pest organism, genes involved in neurotransmission in a pest organism, genes involved in development in a pest organism, and genes expressed in the insect alimentary canal or Malpighian tubules, and wherein the portion of the sequence of the at least one insect gene is at least 50 nucleotides in length;

a first enhancer operably linked to the first promoter,

a second enhancer operably linked to the second promoter,

a first transcriptional terminator, wherein the first transcriptional terminator is positioned so as to terminate transcription directed by the first promoter;

a second transcriptional terminator, wherein the second transcriptional terminator is positioned so as to terminate transcription directed by the second promoter, wherein the two promoters are operably linked to the DNA segment, and wherein the promoters are oriented so as to direct transcription of both sense and antisense RNA transcripts from the DNA segment.

123 [192]. (Once amended) The pest control agent of any of claims 111, 112, and 113, wherein the baculovirus is selected from the group consisting of: the *Autographa californica* multiple polyhedrosis virus, the *Orgyia pseudotsugata* MNPV, the *Lymantria dispar* MNPV, the *Helicoverpa zea* NPV, and the *Bombyx mori* NPV.

131. (Once amended) A method of controlling insects, the method comprising the step of: contacting a cell in an insect with a first ribonucleic acid (RNA) whose sequence corresponds to at least a portion of at least one gene endogenous to the insect, wherein the first ribonucleic acid hybridizes either with itself or with a second ribonucleic acid with which the cell is also contacted, thereby forming a double-stranded structure within the cell that inhibits expression of at least one gene expressed in the cell, wherein the step of contacting comprises contacting the

insect with a baculovirus, and wherein the first RNA is expressed within 6 hours after the insect is contacted with the baculovirus.

132. (Once amended) A method of controlling insects, the method comprising the step of: contacting a cell in an insect with a first ribonucleic acid (RNA) whose sequence corresponds to at least a portion of at least one gene endogenous to the insect, wherein the first ribonucleic acid hybridizes either with itself or with a second ribonucleic acid with which the cell is also contacted, thereby forming a double-stranded structure within the cell that inhibits expression of at least one gene expressed in the cell, wherein the step of contacting comprises contacting the insect with a baculovirus, and wherein the RNA is expressed substantially in the absence of viral replication.

133. (Once amended) A method of controlling insects, the method comprising the step of: contacting a cell in an insect with a first ribonucleic acid (RNA) whose sequence corresponds to at least a portion of at least one gene endogenous to the insect, wherein the first ribonucleic acid hybridizes either with itself or with a second ribonucleic acid with which the cell is also contacted, thereby forming a double-stranded structure within the cell that inhibits expression of at least one gene expressed in the cell, wherein the step of contacting comprises contacting the insect with a baculovirus, and wherein the baculovirus does not establish a productive infection.

134. (Once amended) The method of claim 131, wherein the insect is a *Lepidopteran*.

138. (Once amended) The method of claim 131, wherein the gene is selected from the group consisting of: genes that are essential in a pest organism, genes involved in neurotransmission in a pest organism, genes involved in development in a pest organism, and genes expressed in the insect alimentary canal or Malpighian tubules.

139. (Once amended) The method of claim 131, wherein the baculovirus is selected from the group consisting of: the *Autographa californica* multiple polyhedrosis virus, the *Orgyia*

pseudotsugata MNPV, the *Lymantria dispar* MNPV, the *Helicoverpa zea* NPV, and the *Bombyx mori* NPV.

140. (Once amended) The method of claim 131, wherein the step of contacting comprises applying the baculovirus to organisms on which the insect feeds.

B8
141. (Once amended) The method of claim 131, whereby one or more biological or physiological functions of the insect is inhibited.

B9
142. (New) The agent of claim 73 or claim 74, wherein the cell is an insect cell, and the gene is an insect gene.

143. (New) The agent of claim 75 or 78, wherein the cell is an insect cell, and the gene is an insect gene.

144. (New) The agent of claim 75 or 78, wherein at least a portion of the ribonucleic acid sequence is substantially identical to at least a portion of the sequence of the at least one gene.

145. (New) The agent of claim 75 or 78, wherein the cell forms part of a tissue of a target pest organism.

146. (New) The agent of claim 75 or 78, wherein the baculovirus is selected from the group consisting of: the *Autographa californica* multiple polyhedrosis virus, the *Orgyia pseudotsugata* MNPV, the *Lymantria dispar* MNPV, the *Helicoverpa zea* NPV, and the *Bombyx mori* NPV.

147. (New) The agent of claim 75 or 78, wherein the at least one gene to be inhibited is an essential gene in an insect.

148. (New) The agent of claim 75 or 78, wherein at least one gene to be inhibited is selected

from the group consisting of: genes that are essential in a pest organism, genes involved in neurotransmission in a pest organism, genes involved in development in a pest organism, and genes expressed in the insect alimentary canal or Malpighian tubules.

149. (New) The agent of claim 75 or 78, wherein the at least one gene to be inhibited is naturally found in an insect selected from the order *Lepidoptera*.

150. (New) The agent of claim 75 or 78, wherein the at least one gene to be inhibited is naturally found in an insect selected from the list consisting of: the cotton bollworm (*Helicoverpa zea*), the cabbage looper (*Trichoplusia ni*), the alfalfa looper (*Autographa californica*), the tobacco hornworm (*Manduca sexta*), the tobacco budworm (*Heliothis virescens*), the fall armyworm (*Spodoptera frugiperda*), the European corn borer (*Ostrinia nubilalis*), the eastern spruce budworm (*Choristoneura fumiferana*), the western spruce budworm (*C. occidentalis*), and the gypsy moth (*Lymantria dispar*).

151. (New) An insecticidal composition comprising the agent of claim 142 or 150 and an agriculturally suitable carrier.
